

What is claimed is:

1. An ultrasonic cleaner comprising:
a housing having an U-shaped cross section;
an ultrasonic transducer placed on the inner bottom surface of the housing; and
a weight, provided on the housing, for preventing the vibration of the wall of the housing.
2. The ultrasonic cleaner according to claim 1, wherein the weight is provided on at least one of the outer wall surface and inner wall surface of the housing.
3. The ultrasonic cleaner according to claim 1, wherein the weight is provided on the inner bottom surface of the housing in an area where vibration caused by the ultrasonic transducer is not prevented.
4. The ultrasonic cleaner according to claim 1, wherein the weight is formed by changing the thickness of the housing.
5. The ultrasonic cleaner according to claim 1, wherein the weight is provided on the entire surface of the wall of the housing.
6. A wet treatment nozzle which comprises an introduction

passage for introducing a treatment liquid on one side, an exhaust passage for exhausting the treatment liquid after a wet treatment on the other side, and a vibration guide member, interposed between the introduction passage and the exhaust passage, for guiding the treatment liquid introduced from the introduction passage to an object to be treated and wet treating the object while vibrating it, wherein

the vibration guide member is the ultrasonic cleaner of claim 1.

7. An ultrasonic cleaner comprising;

a housing having an U-shaped cross section and a hollow portion therein;

an ultrasonic transducer placed on the inner bottom surface of the inner U-shaped portion of the housing;

a liquid for preventing empty heating charged into the hollow portion to transmit vibration from the ultrasonic transducer to the outer bottom surface of the outer U-shaped portion of the housing; and

a weight provided on the housing to prevent the vibration of the wall of the housing.

8. The ultrasonic cleaner according to claim 7, wherein the weight is provided on at least one of the outer wall surface or the inner wall surface forming the outer U-shaped portion of the

housing.

9. The ultrasonic cleaner according to claim 7, wherein the weight is provided on at least one of the outer wall surface and the inner wall surface forming the inner U-shaped portion of the housing.

10. The ultrasonic cleaner according to claim 7, wherein the weight is provided on at least one of the inner bottom surface of the outer U-shaped portion and the bottom surface of the inner U-shaped portion of the housing in an area where vibration caused by the ultrasonic transducer is not prevented.

11. The ultrasonic cleaner according to claim 7, wherein the weight is formed by changing the thickness of the outer U-shaped portion or the inner U-shaped portion of the housing.

12. The ultrasonic cleaner according to claim 7, wherein the weight is provided on the entire surface of the wall of the housing.

13. The ultrasonic cleaner according to claim 7, wherein the housing is constructed such that a second housing whose center portion is depressed and whose end portion around the center portion is formed like a visor is arranged around a first housing

whose center portion is depressed and whose end portion around the center portion is formed like a visor, and the hollow portion is formed between the first housing and the second housing by sandwiching a packing between the end portions of the housings.

14. The ultrasonic cleaner according to claim 13, wherein the packing is made of an elastic member having a through hole in the center, the first housing and the second housing are made of a plate member, the elastic member is sandwiched between the visor-like end portion of the first housing and the visor-like end portion of the second housing by a bolt penetrating these end portions, and the thickness of the packing is changed by adjusting the fastening degree of the bolt.

15. A wet treatment nozzle comprising an introduction passage for introducing a treatment liquid on one side, an exhaust passage for exhausting the treatment liquid after a wet treatment on the other side, and a vibration guide member, interposed between the introduction passage and the exhaust passage, for guiding the treatment liquid introduced from the introduction passage to an object to be treated and wet treating the object while vibrating it, wherein

the vibration guide member is the ultrasonic cleaner of claim 7.

16. The wet treatment nozzle according to claim 6, wherein the weight is provided on at least one of the outer wall surface and the inner wall surface of the housing in the ultrasonic cleaner.

17. The wet treatment nozzle according to claim 6, wherein the weight is provided on the inner bottom surface of the housing in an area where vibration caused by the ultrasonic transducer is not prevented in the ultrasonic cleaner.

18. The wet treatment nozzle according to claim 6, wherein the weight is formed by changing the thickness of the housing in the ultrasonic cleaner.

19. The wet treatment nozzle according to claim 6, wherein the weight is provided on the entire surface of the wall of the housing in the ultrasonic cleaner.

20. The wet treatment nozzle according to claim 15, wherein the weight is provided on at least one of the outer wall surface and inner wall surface forming the outer U-shaped portion of the housing in the ultrasonic cleaner.

21. The wet treatment nozzle according to claim 15, wherein the weight is provided on at least one of the outer wall surface and the inner wall surface forming the inner U-shaped portion

of the housing in the ultrasonic cleaner.

22. The wet treatment nozzle according to claim 15, wherein the weight is provided on at least one of the inner bottom surface of the outer U-shaped portion and the bottom surface of the inner U-shaped portion of the housing in an area where vibration caused by the ultrasonic transducer is not prevented in the ultrasonic cleaner.

23. The wet treatment nozzle according to claim 15, wherein the weight is formed by changing the thickness of the outer U-shaped portion or the inner U-shaped portion of the housing in the ultrasonic cleaner.

24. The wet treatment nozzle according to claim 15, wherein the weight is provided on the entire surface of the wall of the housing in the ultrasonic cleaner.

25. The wet treatment nozzle according to claim 15, wherein the housing is constructed such that a second housing whose center portion is depressed and whose end portion around the center portion is formed like a visor is arranged around a first housing whose center portion is depressed and whose end portion around the center portion is formed like a visor, and a hollow portion is formed between the first housing and the second housing by

sandwiching a packing between the end portions of the housings in the ultrasonic cleaner.

26. The wet treatment nozzle according to claim 15, wherein the packing is formed of an elastic member having a through hole in the center, the first housing and the second housing are made of a plate member, the elastic member is sandwiched between the visor-like end portion of the first housing and the visor-like end portion of the second housing by a bolt penetrating these end portions, and the thickness of the packing is changed by adjusting the fastening degree of the bolt in the ultrasonic cleaner.